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The Travel Industry's **Worst** KPI Is **Bad** For The Climate

Let's Replace It With A Much Better One

"Worst" is a harsh word.

Which travel industry KPI* deserves this treatment?

*Key Performance Indicator

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IT'S THE METRIC THAT

- ✓ **Seems needed**
- ✓ **Is gaining adoption**
- ✓ **Influences important decisions**
- ✓ **But creates bad outcomes**

The travel industry's worst KPI is

CO2 per Passenger

It tells us how much of a flight's CO2 emissions is allocated to each passenger (usually in kilograms.)

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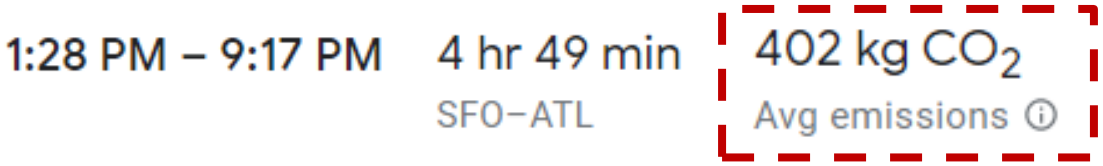
An example from Google Flights



Wait – don't we **want** to know this number?

How can this be bad, let alone the "worst" KPI in travel?

CO2 per Passenger

- ✓ **Seems needed**
- ✓ **Is gaining adoption**

Travelers need a way to judge which flights are better for the climate.

This metric **seems** perfect for that mission.

That's why airlines, travel agencies, and corporate booking tools are rushing to show this metric to travelers and travel managers.

CO2 per Passenger

- ✓ **Influences important decisions**

Business travelers are increasingly sensitive to the CO2 implications of their trips.

Supplier contracts are being awarded based in part on sustainability metrics.

Airlines know they need to perform well on these metrics.

HERE'S THE PROBLEM:

By reducing

CO2 per Passenger

we risk creating

more CO2,

not less.

What? Really?
How?

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500 kgs of CO2

per Passenger

We've been led to believe that a smaller number is better for the climate.

But is isn't.

Not if we use the **total amount** of CO2 emissions as our criteria.

CONSIDER THESE TWO FIRMS:

Firm A took flights averaging **2** hours each way and has **300** kgs CO2 per passenger.

Firm B took flights averaging **4** hours each way and has **600** kgs CO2 per passenger.

Firm A looks much better because it **flew shorter** flights.

Firms should **not be rewarded** for taking short flights.

The CO2 per Passenger KPI fails here.

OR THESE TWO FIRMS. EACH SPENT $3 MILLION ON AIR TRAVEL.

Firm C had an average ticket price of **$500** and **500** kgs CO2 per ticket.

Firm D had an average ticket price of **$2,000** and **1,500** kgs CO2 per ticket.

Firm C took 6,000 trips and emitted **3,000** metric tons of CO2.

Firm D took 1,500 trips and emitted 2,250 metric tons – **25% less CO2** than Firm C.

The CO2 per Passenger (Ticket) KPI makes the wrong firm look good.

THERE'S MORE:

We **don't want** airlines to drive down their **CO2 per Passenger** numbers.

Why not?

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Because they can **reduce** this metric while **growing** their emissions. Here's how:

1. Fill planes with all economy seats. This maximizes the passenger number which shrinks the metric.
2. Offer cheap fares to make sure those extra seats are filled. This creates **more** demand for flights, not less.
3. **More demand** means more people flown, so **more fuel is burned.**

While CO2 per Passenger has its uses* it **fails** as a KPI for reducing CO2.

We need a **better** KPI, one that will help travelers and airlines make **good** climate decisions.

* E.g., estimating the CO2 associated with a company's Scope 3 airline travel purchases.

The key is to **eliminate unjustified** trips.

This is the easiest, quickest way to **significantly** reduce airline emissions.

How can we do this?

Managers can use
all these levers to reduce
unjustified travel:

- ❑ Ask trip approvers to be more vigilant
- ❑ Use a clever tool like TRIPTESTER
  triptester.com
- ❑ Allow higher airfares **to work their magic**

THE MAGIC OF PRICE VS. QUANTITY

"When prices go up, quantity goes down"

Econ 101

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Higher airfares help eliminate airline CO2 in four important ways.

1. Higher prices reduce demand for flights.
2. They make it harder to justify low-value trips.
3. They chew up the travel budget faster, so fewer trips are taken.
4. They make it easier for airlines to invest in sustainable aviation.

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When the goal is to reduce airline CO2, **higher** airfares are our friend.

So the airfare's **price** is the key to a **much better** KPI.

Let's start with the KPI best suited for judging airlines.

The airline's flight-related CO2 for the time period

$$\frac{\text{5,000 MM kgs CO2}}{\text{\$5,000 Million}} = \mathbf{1.00}$$

Kgs CO2 per $

The airline's flight-related revenue for the same period

THE BEST KPI FOR JUDGING AIRLINE CO2

CO2 Per Revenue $

We want to make **this number** as **small** as possible.

Note: Revenue is flight-related; excludes Other Revenue

CO2 Per Revenue $

$$\frac{\text{5,000 MM kgs CO2}}{\text{\$5,000 MM Flight-related revenue}} = \textbf{1.00}$$

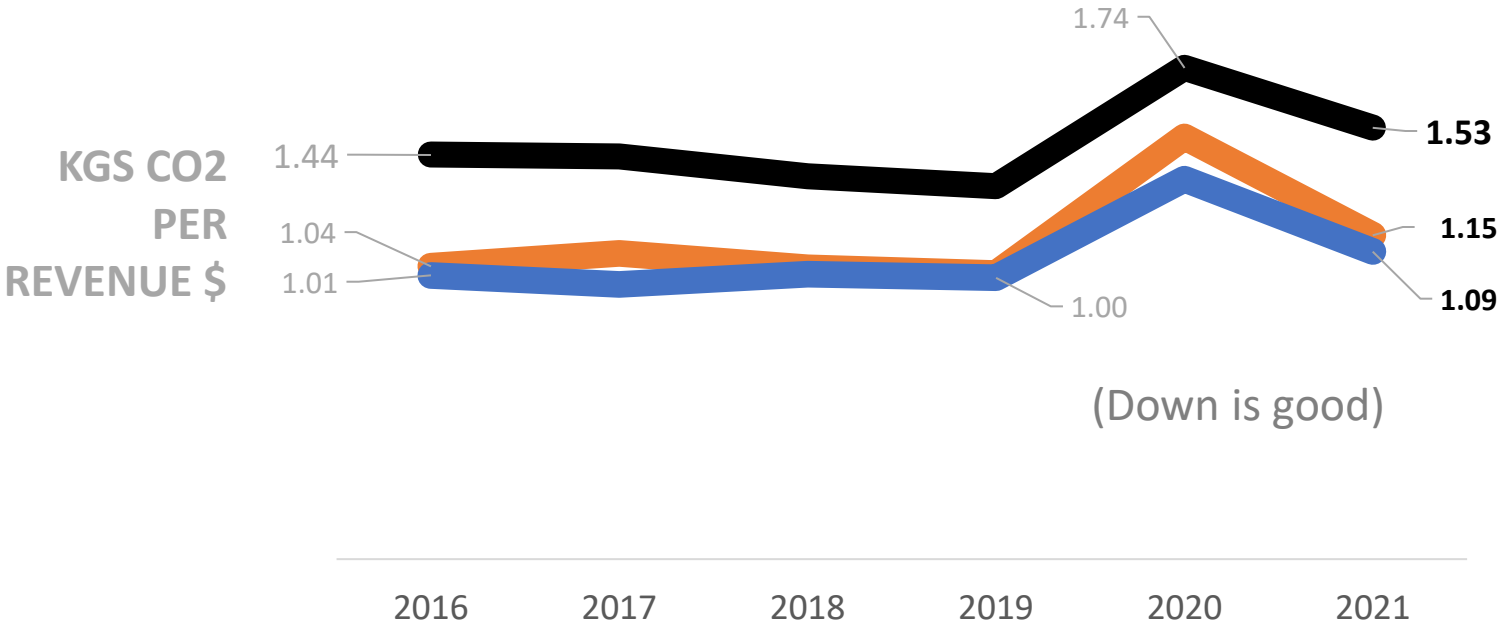
Kgs CO2 per $

This metric gets smaller when:

- ✓ Travelers avoid cheap flights
- ✓ Airlines raise fares
- ✓ Airlines get more fuel-efficient

All are good for the climate.

Note that ultra low cost carriers perform the worst on this new KPI. Why? High-density seating and cheaper fares.



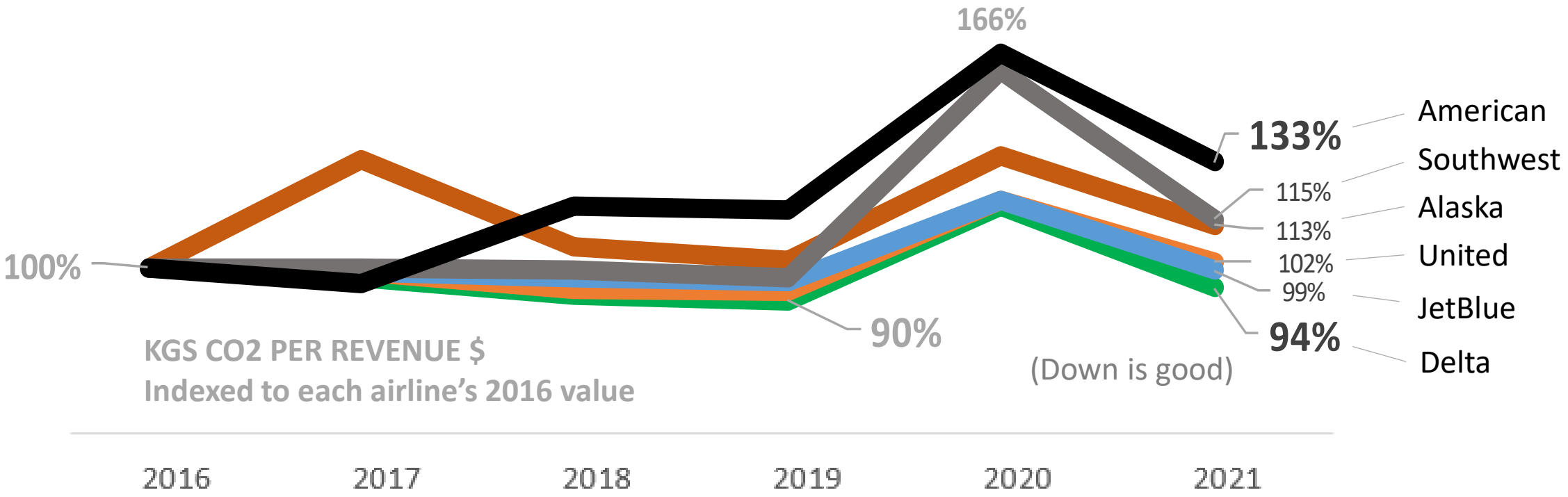
Ultra Low Cost
(Allegiant, Frontier, Spirit)

Lower Cost
(Alaska, Hawaiian, JetBlue, Southwest)

International
(American, Delta, United)

Source: DOT Form 41, Airline 10-Ks. Analysis by Clement Zhang, PhD and his firm Flight BI at flightbi.com

We can now track each airline's progress at **de-carbonizing their flight revenues.**



Source: DOT Form 41, Airline 10-Ks. Analysis by Clement Zhang, PhD and his firm Flight BI at flightbi.com

Fair warning – airline rankings are **very** different when using this new KPI.

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Year: 2021	Rankings, 1 = Best				Kgs of CO2 per			
Airline	Kgs CO2 per $ of Flight Revenue	Kgs CO2 per Passenger	Kgs CO2 per RPM	Kgs CO2 per ASM	$ of Flight Revenue	Passenger	Revenue Passenger Mile (RPM)	Available Seat Mile (ASM)
Delta	1	7	9	8	1.00	205	0.201	0.139
United	2	9	10	10	1.08	252	0.206	0.148
Alaska	3	6	6	5	1.10	195	0.166	0.122
Hawaiian	4	10	7	4	1.11	267	0.174	0.121
JetBlue	5	8	5	7	1.14	224	0.165	0.125
Southwest	6	2	3	6	1.18	128	0.157	0.123
American	7	5	8	9	1.19	188	0.193	0.147
Allegiant	8	4	4	3	1.30	146	0.164	0.116
Frontier	9	1	1	1	1.35	125	0.127	0.097
Spirit	10	3	2	2	1.84	137	0.132	0.104

Source: DOT Form 41, Airline 10-Ks. Analysis by Clement Zhang, PhD and his firm Flight BI at flightbi.com

Now that
we can judge
how **clean or dirty**
any airline's revenues
are CO2-wise,
can we do the
same for **airfares?**

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Yes.

Easily, if your
airline booking tool
already has the
CO2 per Passenger
data.

Here's how…

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1. Put the CO2 per Passenger metric here

$$\frac{500 \text{ kgs CO2}}{\$500 \text{ ticket price}} = 1.00$$

Kgs CO2 per $

*2. Put the **price** here*

THE BEST KPI FOR JUDGING AIRFARE CO2

"CO2 Per (Airfare) $"

(or Hotel, or Car Rental, or Meetings)

We want to make **this number** as **small** as possible.

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If the goal is to de-carbonize a company's spend on air travel:

	CO2 per Passenger	Ticket Price	**CO2 per $**
Flight A	500 kgs	$500	1.00
Flight B	600 kgs	$500	1.20
Flight C	700 kgs	$800	**0.88**

Take the flight with the lowest CO2 per $

Taking a more expensive flight is a tough pill for some to swallow.

Remember, if the goal is to reduce CO2, higher airfares are our friend.

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Higher airfares help eliminate airline CO2 in four important ways.

1. Higher prices reduce demand for flights.
2. They make it harder to justify low-value trips.
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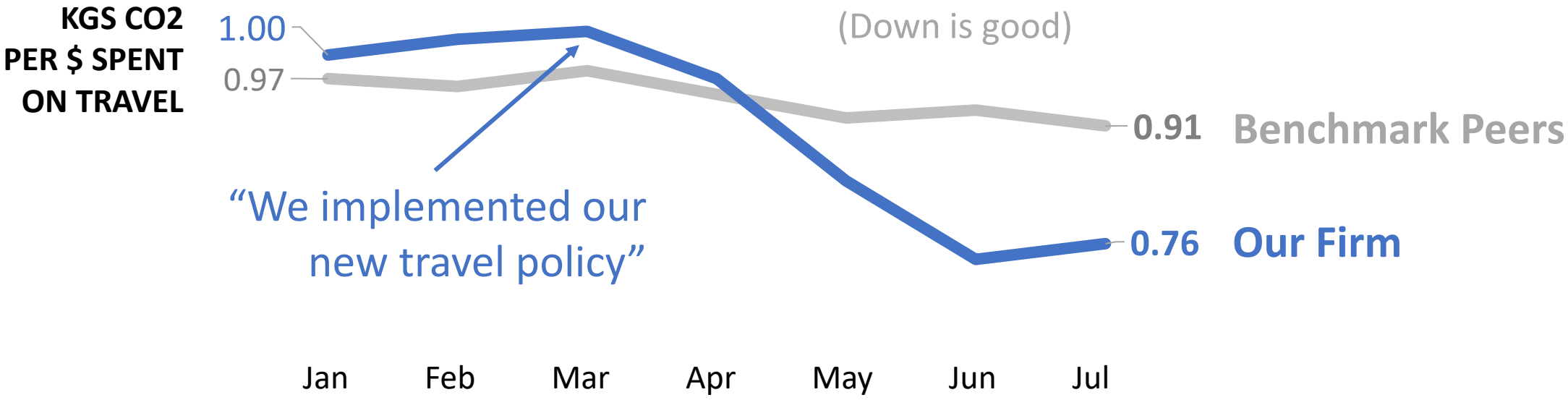
Companies can now show their progress toward **de-carbonizing their travel spend.**



THE CASE FOR THIS KPI

CO2 Per (Airfare) $

(or Hotel, or Car Rental, or Meetings)

- ✓Tracks decarbonization of spend on air travel
- ✓Reduces emissions by rewarding the purchase of higher-priced airfares
- ✓Punishes the purchase of cheaper fares
- ✓Easy to combine with other spend categories, e.g. hotel
- ✓Easy to explain to management

Good Next Steps for

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Travel Budget Owners

Decide your priority. Is it reducing CO2 or ticket prices? These goals conflict.

Share your priority with your travel buyer and travelers.

Travel Managers & Buyers

Track ticketed CO2 per passenger.

Adopt “CO2 per Revenue $” as a KPI.

Set quarterly reduction goals for this KPI.

Share the rationale with travelers.

Airline Booking Tools

Display “CO2 per Revenue $” in the shopping flow.

Allow admins to preference flights on this metric.

Travel Management Companies

Aggregate data for this KPI across all customers.

Provide benchmarking on this new KPI.

Help clients with strategies for reducing it.

Airlines

Report this metric in 10-Qs and 10-Ks.

Set and share goals for annual reductions in this KPI.

Make this KPI a discussion point in QBRs*.

*Quarterly Business Reviews with corporate customers

Thank you to
Clement Zhang, PhD and
Founder of Flight BI
for the analyses contained
in this presentation.

Visitors are welcome
to explore more
airline CO2 data on
Flightbi.com

https://flightbi.com/annual-co2-emission-by-us-carriers/

Flight BI

Flight Business Intelligence

Always glad to connect on LinkedIn

Continue the discussion with Scott Gillespie

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tClara www.tclara.com

TRIPTESTER www.triptester.com

Next Speaking Events

July 19 **DFW GBTA, "Unlocking Travel's Strategic Value"**

Aug. 15, 16 **GBTA Convention in San Diego**

Mon. 10:00	Sustainability Buzzwords
Mon. 11:00	Post-Pandemic Predictions
Mon. 4:30	Travel Program Optimization
Tue. 11:15	How Should We Meet?